

INTERNATIONAL SEARCH REPORT

Int'l Application No
PCT/EP2004/012481

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H05K5/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H05K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X	US 5 355 532 A (KUBO KAZUHIKO ET AL) 11 October 1994 (1994-10-11) column 3, line 14 - line 24 column 4, line 55 - line 62 claim 1; figure 7	1
Y		2-4, 6, 7
Y	WO 92/03031 A (MARCONI GEC LTD) 20 February 1992 (1992-02-20) page 1, line 6 - line 21 page 2, line 11 - line 18 page 5, line 1 - line 11; figure 1 page 7, line 11 - line 19; figures 2-4 page 8, line 11 - line 18; figure 7 page 9, line 3 - line 6; figure 8 ----- -/--	2-4, 6, 7

☒ Further documents are listed in the continuation of box C

☒ Patent family members are listed in annex

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T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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G document member of the same patent family

Date of the actual completion of the international search

27 June 2005

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2002/049042 A1 (WATANABE TAKAHIRO ET AL) 25 April 2002 (2002-04-25) paragraph '0047!; figure 2 paragraph '0052!; figure 4 -----	5,6
A	US 5 007 841 A (SMOLLEY ROBERT) 16 April 1991 (1991-04-16) column 7, line 15 - line 27; figure 2 column 7, line 39 - line 47 -----	7
A	EP 0 431 566 A (ROGERS CORP) 12 June 1991 (1991-06-12) column 1, line 42 - column 2, line 33 column 6, line 2 - line 13; figure 1 -----	7

INTERNATIONAL SEARCH REPORT

Int 1st Application No
PCT/EP2004/012481

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5355532	A	11-10-1994	JP 3046827 A DE 69019245 D1 DE 69019245 T2 EP 0408066 A2	28-02-1991 14-06-1995 04-01-1996 16-01-1991
WO 9203031	A	20-02-1992	WO 9203031 A1	20-02-1992
US 2002049042	A1	25-04-2002	JP 3582460 B2 JP 2002009225 A DE 10129032 A1 FI 20011247 A FR 2810495 A1 GB 2365629 A ,B GB 2376806 A ,B SE 522867 C2 SE 0102167 A	27-10-2004 11-01-2002 10-01-2002 21-12-2001 21-12-2001 20-02-2002 24-12-2002 16-03-2004 21-12-2001
US 5007841	A	16-04-1991	US 4574331 A US 5007843 A US 5019945 A US 5315481 A US 4733172 A US 4581679 A DE 3480984 D1 EP 0127377 A2 JP 1616807 C JP 2040215 B JP 60005534 A KR 9106953 B1	04-03-1986 16-04-1991 28-05-1991 24-05-1994 22-03-1988 08-04-1986 08-02-1990 05-12-1984 30-08-1991 10-09-1990 12-01-1985 14-09-1991
EP 0431566	A	12-06-1991	US 5049084 A EP 0431566 A1 JP 4137373 A	17-09-1991 12-06-1991 12-05-1992